UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

JUN 1 1 2010

REPLY TO THE ATTENTION OF:

WW-16J

U.S. Army Corps of Engineers, Louisville District
Colonel Keith A. Landry, District Commander
600 Dr. Martin Luther King Place
Louisville, Kentucky 40202

Re: Public Notice LRL-2010-193-GJD, Farmersburg Bear Run Amendment #4 (S-256-4) / Peabody Midwest Mining, LLC

Dear Colonel Landry:

The U.S. Environmental Protection Agency submitted comments on the above-referenced public notice and the associated Section 404 permit application (permit application) on May 21, 2010. In those comments, EPA stated that the proposed project **may** result in substantial and unacceptable impacts to the White River, an aquatic resource of national importance (ARNI). EPA continues to have significant concerns regarding the adverse direct and cumulative impacts to the White River and, based on our review of the information available, have determined that the proposed project **will** result in substantial and unacceptable impacts to an ARNI. The detailed rationale for EPA's determination is enclosed with this letter.

As stated in the letter of May 21, 2010, EPA believes that the project may be a candidate for an Environmental Impact Statement (EIS). As you make your determination whether to prepare an EIS, we request that you consider the large-scale nature of the proposed project's impacts, e.g., the loss of approximately 24 miles of stream and 27 acres of wetland and the cumulative impacts to the watersheds. EPA recommends the applicant provide a wider range of alternatives, better documentation of avoidance and minimization efforts, a comprehensive cumulative impacts analysis, substantive baseline physical, chemical and biological data, and the requested SMCRA information so that we may evaluate impacts of the project and compliance with the Guidelines. Additionally, the mitigation proposal, as currently drafted, would not serve as a basis for supporting a Finding of No Significant Impact (FONSI). We would appreciate the opportunity to discuss the preparation of an EIS with you.

This letter is sent in accordance with the August 1992 Memorandum of Agreement between the EPA and the Department of the Army, Part IV, paragraph 3(b), regarding Section 404(q) of the Clean Water Act. We look forward to a response to our comments of May 21, 2010, and responses to comments from other resource agencies and interested parties. Please contact Wendy Melgin at (312) 886-7745 with any questions you may have.

Sincerely,

Susan Hedman
Regional Administrator

Enclosure

cc: George J. Delancey, Louisville District (with enclosure)
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Enclosure

Farmersburg Bear Run Amendment #4 (S-256-4)/Peabody Midwest Mining, LLC
Public Notice LRL-2010-193-GJD

U.S. EPA rationale for concluding that project will result in a substantial and unacceptable impacts to an Aquatic Resource of National Importance

As described in the public notice for the permit application, the applicant, Peabody Midwest Mining, LLC (Peabody) proposes to fill 126,686 linear feet of streams and 27.46 acres of wetlands for the purpose of expanding surface coal mining activities by 2,666.5 acres on the Bear Run surface coal mine in the Buttermilk Creek, Middle Fork Creek, Maria Creek, Pollard Ditch, and Brewer Ditch watersheds (tributaries to the Lower White River and Middle Wabash-Busseron Creek) south of Dugger in Sullivan County, Indiana. A Clean Water Act Section 404 permit was issued for the Bear Run East Pit surface coal mine project, LRL-2006-1614-GJD (S-256-1, S-256-2, S-256-3), in October 2007. EPA objected to that project in a letter dated March 1, 2007, due to concerns regarding the adequacy of the alternatives analysis and mitigation plan. Additionally, EPA asserted that the project would likely result in further impairment to Black Creek-Brewer Ditch and Buttermilk Creek water bodies in the Busseron Creek watershed. The Bear Run East Pit permit area is 4,476 acres in size. Permitted impacts include 122,785 linear feet of streams and 61.6 acres of wetlands south of Dugger in Sullivan County, Indiana. The permit was issued over EPA's objection.

Impacts to Aquatic Resources of National Importance

The White River is a two-forked river that runs through a substantial portion of central and southern Indiana. The White River is listed by the State of Indiana-Natural Resources Commission as an "Outstanding River." The listing is due to consideration for inclusion in the National Wild and Scenic Rivers System, identification by state natural heritage programs as a river of outstanding natural importance, and because of its use for state-designated canoe/boating routes. In 1997, the White River was named one of *American Rivers* "most endangered and threatened rivers," due in part to loss of riparian areas and water withdrawals. "Excessive amounts of sediments, nutrients and bacteria degrade the water quality of the Lower White River watershed causing an unbalanced fish community with depressed populations with a limited diversity."[1]

EPA believes that impacting an additional 126,686 linear feet of several headwater systems tributary to the Lower White River and Middle Wabash-Busseron

[1] http://www.in.nrcs.usda.gov/technical/RWA/Lower%20White/Lower%20White.pdf

Creek, as well as 27.46 acres of associated wetlands, **will** have substantial and unacceptable adverse impacts on the White River. Through our review of the permit application, we have identified the following concerns: **1)** non-compliance with the 404(b)(1) Guidelines, including the 2008 Compensatory Mitigation Rule (Mitigation Rule) and inadequate cumulative impacts assessment; **2)** deficient biological, physical, and chemical baseline information; and, **3)** relevant information from the Surface Mining Control and Reclamation Act (SMCRA) permit was not provided with the permit application.

Alternatives Analysis and Minimization (40 CFR §230.10(a) and §230.10(d))

As stated in the May 21, 2010 letter, the 404 (b)(1) Guidelines (the Guidelines) require the applicant to demonstrate there are no practicable alternatives available that would have a less adverse impact on the aquatic environment for non-water dependant activities. For special aquatic sites, the Guidelines presume that less damaging upland alternatives are available for these activities unless demonstrated otherwise by the applicant.[2] An alternative is practicable if it is capable of being done considering cost, logistics and available technology in light of overall project purpose.[3] After reviewing the information available, EPA believes the applicant has failed to demonstrate that impacts have been avoided and minimized to the maximum extent practicable, and has not clearly demonstrated that its preferred alternative is the least environmentally damaging practicable alternative (LEDPA).

According to the Guidelines, the applicant should present a reasonable range of alternatives that avoid/minimize the impacts to streams and wetlands to the extent practicable. The amount of effort and detail in the analysis should be commensurate with the level of aquatic resource impacted, which, in this case, we believe to be significant. The alternatives analysis should contain a full range of alternatives including, but not limited to, alternative mine designs, mining methods, and project sites, as well as a thorough discussion of the practicability of each. The applicant must demonstrate that the following sequence of steps has been taken: 1) avoidance of aquatic resources and hydrology sources, 2) minimization of impacts to aquatic resources (documentation of minimization efforts should include the utilization of operational, geochemical, hydrological and sediment control Best Management Practices), and 3) compensation for any unavoidable losses. These steps have not been clearly documented in the public notice or in the permit application. EPA recommends that the applicant revise the proposed project's alternatives analysis to incorporate these requirements before the U.S. Army Corps of Engineers finalizes its review.

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[2] 40 C.F.R. § 230.10(a)(3)
[3] 40 C.F.R. § 230.10(a)(2)

Significant Degradation of Waters of the United States (40 CFR §230.10(c))

The Guidelines also state that no discharge should be allowed if it will cause or contribute to significant degradation of waters of the United States (WOUS).[4] EPA believes that impacting 126,686 linear feet of several headwater tributary systems to the Lower White River and Middle Wabash-Busseron Creek watersheds and 27.46 acres of associated wetlands **will** have substantial and unacceptable adverse effects through the elimination of headwater stream functions, loss of diluting headwaters, and loss of nutrients and habitat. Headwater streams encompass over 80% of stream networks and watershed land areas.[5] Headwater streams and their associated wetland and riparian systems provide floodwater retention, improve water quality by diluting and filtering pollutants from surface water runoff, and provide processed leaf litter and organic matter, which are important to sustaining biological communities in downstream waters. Collectively, organic interactions and improvements in water quality and stream channel conditions provide habitat for aquatic fauna. Additionally, terrestrial fauna including mammals and passerines benefit from the interconnected stream corridors that create edge habitat, travel corridors and supply cover and food sources. Headwater streams and their associated wetlands are important to the ecological, chemical, physical and biological integrity of downstream watersheds. Therefore, EPA believes that substantial impacts associated with the proposed project will cause or contribute to significant degradation of WOUS.

Violations of State Water Quality Standards (40 CFR §230.10(b)(1))

The Guidelines state that "no discharge of dredged or fill material may be permitted if it causes or contributes, after disposal site dilution and dispersion, to violations of any applicable State water quality standard."[6] Buttermilk Creek is listed by the State of Indiana as impaired for sulfates and total dissolved solids (TDS), Middle Fork Creek is listed by the State of Indiana for low dissolved oxygen (DO), E. coli, and impaired biotic communities, Black Creek-Brewer Ditch is listed as impaired by the State of Indiana for sulfates, impaired biotic communities, and TDS, Black Creek-Singer Ditch is listed by the State of Indiana as impaired for E. coli, and Busseron Creek-Tanyard Branch is listed by the State of Indiana as impaired for sulfates and TDS. During mining, sediment concentrations and load rates increase dramatically compared to the pre-mining condition.[7] Increased erosion and transport of sediments associated with mining can alter the flow rate of stream channels downstream, transport chemicals downstream, and adversely affect downstream aquatic ecosystems. Studies have found that more frequent,

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[4] 40 C.F.R § 230.10(c)

[5] Naiman, R.J., 1983. The Annual Pattern and Spatial Distribution of Aquatic Oxygen Metabolism in Boreal Forest Watersheds. *Ecological Monographs* 53:73-94.

[6] 40 C.F.R. § 230.10(b)(1)

[7] Bonta, James V., 2000. "Impact Of Coal Surface Mining And Reclamation On Suspended Sediment In Three Ohio Watersheds." *Journal of the American Water Resources Association* (JAWRA) 36(4): 869-887.

higher daily flow volumes occur during the active phases of mining compared to pre-mining conditions.[8] This may be attributed to the loss of vegetative cover that normally reduces runoff volumes and promotes absorption of water for vegetation growth. Although modern reclamation practices may reduce some of the environmental effects of surface coal mining, substantial impacts to a landscape and its watershed still occurs during the active phases of mining. Changes in land use in or near headwater stream systems such as deforestation, mining, agricultural development, and urbanization will affect the water quality and food web dynamics in downstream watersheds.

Mitigation (40 CFR § 230.91-230.98, 33 CFR § 332.1-332.8)

The applicant proposes to reconstruct intermittent streams at a ratio of 1:1 with 100 ft. wide riparian buffers and ephemeral streams at a ratio of 0.5:1 with 50 ft. wide riparian buffers. Wetlands would be mitigated at a ratio of 3:1 for forested wetlands, 2:1 for emergent wetlands, 2:1 for scrub-shrub wetlands and 2:1 for wetlands with unconsolidated bottoms in un-mined areas. Any wetlands in previously-mined and reclaimed areas would all be mitigated with forested wetland at the following ratios: forested wetlands at 2:1, scrub-shrub wetlands at 2:1, emergent wetlands at 1.5:1, and unconsolidated bottom wetlands at 1.5:1. EPA does not take a final position on the mitigation ratios at this time. Once the LEDPA has been identified, the amount and type of mitigation required to compensate for lost functions and values can be determined. However, after reviewing the available information, EPA believes that the mitigation plan for the proposed project is inadequate, as it does not meet the minimum requirements set forth in the Mitigation Rule. Specifically, there is no rationale given for the wetland and stream mitigation ratios proposed, the performance standards for stream and wetland mitigation are vague, it is unclear how hydrology will be restored in the mitigation areas, the adaptive management plan lacks sufficient detail to make a determination of compliance with the Mitigation Rule, and the proposal doesn't include any provisions for long-term management of the mitigation areas, among other issues. To date, our detailed comments on the mitigation plan, included as "Attachment 1" to the May 21, 2010 letter (Attachment 1), have not been addressed.

Cumulative Impacts

EPA requested that the significance of the permit application in the context of other actions in the Lower White River and Middle Wabash-Busseron Creek watersheds be appropriately characterized and that the applicant include a more complete assessment of cumulative impacts to the watershed in Attachment 1. In order to fully analyze the past, present, and reasonably foreseeable impacts as required under National Environmental Policy Act (NEPA) and the Guidelines, EPA recommends that the

[8] Bonta, James V., C. R. Amerman, T. J. Harlukowicz, and W. A. Dick, 1997. Impact of Coal Surface Mining on Three Ohio Watersheds-Surface-Water Hydrology. *Journal of the American Water Resources Association* (JAWRA) 33(4): 907-917.

applicant prepare a cumulative impacts analysis for the affected HUC 12 watersheds, at minimum, that details changes in hydrology, drainage patterns and channel composition, sediment transport, changes in discharge and retention rates and changes in runoff velocity and volume. Impact assessments for wetlands should include direct and indirect impacts from previous and current actions, as well as, potential impacts from future actions as a result of changes in surface and groundwater hydrology. The analysis should also discuss the ecological effects associated with the loss of forest cover and increased forest fragmentation. According to the U.S. Fish and Wildlife Service, the mining operation will destroy an extensive network of forested stream corridors and adjacent upland forest in the unmined area, eliminating at least 1,400 acres of habitat for birds and other forest wildlife. Although most of the habitat is proposed to be restored after mining, the topographic diversity will be reduced and the forest will not mature for several decades.

The cumulative impacts discussion should include more information about locations, extent, and dates of previous mining, present locations and extent of current mining, reasonably foreseeable mining activities and infrastructure needs in relation to the impacts to the Lower White River and Middle Wabash-Busseron Creek watersheds. This assessment should discuss how the proposed operation, in conjunction with previous, current and future operations within the watershed, may affect the physical, chemical and biological integrity of the Lower White River and Middle Wabash-Busseron Creek watersheds as a result of the loss of headwater and wetlands resources. An appropriate cumulative impacts assessment has not yet been provided by the applicant.

Baseline Data

As a part of the monitoring program for affected and reconstructed streams, biological monitoring is required to ensure there is no degradation to the communities that inhabit the streams. Biological monitoring, along with water chemistry and physical assessments, must occur prior to the initiation of mining activities to establish baseline conditions, during the mining activities to assist in determining potential impacts to aquatic habitat and water quality downstream of the impacts, and must continue at least five years after the completion of stream restoration and site reclamation activities at the mine site where appropriate to determine mitigation success. The suite of monitoring requirements is not included in the permit application. EPA requested that the physical assessment datasheets and biological sampling datasheets be provided for our review because we have several concerns with the Bio-Assessment Report submitted with the permit application. To date, the datasheets have not been submitted.

SMCRA Permit Information

In order to complete an appropriate review of proposed impacts under the Guidelines, EPA requested that the applicant submit sections of the SMCRA permit containing information relevant to Section 404 permit review:

General Operations Information
Geological Information
Hydrological Information
Land Use and Soils Information
Fish and Wildlife Information
Areas Unsuitable for Mining
Environmental Resource & Property Control Map
Operations Map
Pre-Mining Land Use Map
Post-Mining Land Use Map
Soils Map

The above-listed SMCRA information has not been submitted to EPA.

As stated in the letter of May 21, 2010, EPA believes that the project may be a candidate for an Environmental Impact Statement (EIS). In making a determination whether to prepare an EIS, the U.S. Army Corps of Engineers should consider the large-scale nature of the proposed project's impacts, e.g., the loss of approximately 24 miles of stream and 27 acres of wetland and the cumulative impacts to the watersheds. EPA recommends the applicant provide a wider range of alternatives, better documentation of avoidance and minimization efforts, a comprehensive cumulative impacts analysis, substantive baseline physical, chemical and biological data, and the requested SMCRA information so that we may evaluate impacts of the project and compliance with the Guidelines. Additionally, the mitigation proposal, as currently drafted, would not serve as a basis for supporting a Finding of No Significant Impact (FONSI). EPA would appreciate the opportunity to discuss the preparation of an EIS with the U.S. Army Corps of Engineers.

EPA concludes that the project as proposed **will** result in substantial and unacceptable impacts to an ARNI. Therefore, we recommend denial of the project, as currently proposed.